

What is claimed is:

1. A portable data storage device adapted to plug in an electronic apparatus for reading or writing data
5 therefrom or thereinto, comprising:

an interface unit for plugging in a processing unit of said electronic apparatus;

10 a flash memory into and from which data can be written and read, and being segmented into at least two segments particularly set as a CD-ROM segment and a fixed type hard drive segment; and

15 a control unit located between and coupled with said interface unit and said flash memory to control input and output of data into and from said flash memory; when said interface unit is plugged in said processing unit, said control unit being adapted to identify an
20 operating system under which said processing unit of said electronic apparatus operates and to hide one of said at least two segments of said flash memory that has a disk type not applicable to said operating system used by said processing unit, so that said
25 processing unit may detect only the other one of said

at least two segments that has an applicable disk type.

2. The portable data storage device as claimed in claim
1, wherein said CD-ROM segment is hidden, so that only
5 a disk type that is applicable to Windows 98/ME is
used.
3. The portable data storage device as claimed in claim
1, wherein said CD-ROM segment includes all source
10 codes for a virtual CD-ROM.
4. The portable data storage device as claimed in claim
2, wherein said CD-ROM segment includes all source
codes for a virtual CD-ROM.
- 15 5. The portable data storage device as claimed in claim
3, wherein said CD-ROM segment has an internal file
stored therein and internally includes a start program,
and wherein said processing unit may detect said
20 virtual CD-ROM in said CD-ROM segment via said control
unit to locate a designated start program and
automatically execute the play of said internal file.
6. The portable data storage device as claimed in claim
25 4, wherein said CD-ROM segment has an internal file

stored therein and internally includes a start program,
and wherein said processing unit may detect said
virtual CD-ROM in said CD-ROM segment via said control
unit to locate a designated start program and
5 automatically execute the play of said internal file.

7. The portable data storage device as claimed in claim
5, wherein said CD-ROM segment is set as a read-only
segment.

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8. The portable data storage device as claimed in claim
6, wherein said CD-ROM segment is set as a read-only
segment.

15 9. The portable data storage device as claimed in claim
1, wherein said fixed type hard drive segment is hidden,
so that only a disk type that is applicable to Windows
2000/XP is used.

20 10. The portable data storage device as claimed in claim
1, wherein said fixed type hard drive segment has an
internal file stored therein and internally includes
a start program, and wherein said processing unit may
be triggered via said control unit to locate a
25 designated start program and automatically execute

the play of said internal file.

11. The portable data storage device as claimed in claim
9, wherein said fixed type hard drive segment has an
5 internal file stored therein and internally includes
a start program, and wherein said processing unit may
be triggered via said control unit to locate a
designated start program and automatically execute
the play of said internal file.

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12. The portable data storage device as claimed in claim
10, wherein said fixed type hard drive segment is set
as a read-only segment.

15 13. The portable data storage device as claimed in claim
11, wherein said fixed type hard drive segment is set
as a read-only segment.

14. The portable data storage device as claimed in claim
20 1, wherein said interface unit comprises a USB plug
for plugging in a corresponding USB socket on said
electronic apparatus.

15. The portable data storage device as claimed in claim
25 1, wherein said control unit comprises a micro

controller.

16. The portable data storage device as claimed in claim
15, wherein said micro controller includes a read-only
5 memory for recording a control program.

17. A portable data storage device adapted to plug in an
electronic apparatus for reading or writing data
therefrom or thereinto, comprising:
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an interface unit for plugging in a processing unit
of said electronic apparatus;

a flash memory into and from which data can be written
15 and read, and being segmented into at least three
segments, namely, first, second, and third segments;
said first and said second segment being preset as
a CD-ROM segment and a fixed type hard drive segment,
respectively, and said third segment being set as a
20 removable type disk segment; and

a control unit located between and coupled with said
interface unit and said flash memory to control input
and output of data into and from said flash memory;
25 when said interface unit is plugged in said processing

unit, said control unit being adapted to identify an
operating system under which said processing unit of
said electronic apparatus operates and to hide one
of said first and second segments of said flash memory
5 that has a disk type not applicable to said operating
system used by said processing unit, so that said
processing unit may detect only the other one of said
first or the second segment that has an applicable
disk type.

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18. The portable data storage device as claimed in claim
17, wherein said CD-ROM segment is hidden, so that
only a disk type that is applicable to Windows 98/ME
is used.

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19. The portable data storage device as claimed in claim
17, wherein said CD-ROM segment includes all source
codes for a virtual CD-ROM.

20 20. The portable data storage device as claimed in claim
18, wherein said CD-ROM segment includes all source
codes for a virtual CD-ROM.

21. The portable data storage device as claimed in claim
25 19, wherein said CD-ROM segment has an internal file

stored therein and internally includes a start program,
and wherein said processing unit may detect said
virtual CD-ROM in said CD-ROM segment via said control
unit to locate a designated start program and
5 automatically execute the play of said internal file.

22. The portable data storage device as claimed in claim
20, wherein said CD-ROM segment has an internal file
stored therein and internally includes a start program,
10 and wherein said processing unit may detect said
virtual CD-ROM in said CD-ROM segment via said control
unit to locate a designated start program and
automatically execute the play of said internal file.

15 23. The portable data storage device as claimed in claim
21, wherein said CD-ROM segment is set as a read-only
segment.

24. The portable data storage device as claimed in claim
20 22, wherein said CD-ROM segment is set as a read-only
segment.

25. The portable data storage device as claimed in claim
17, wherein said fixed type hard drive segment is
25 hidden, so that only a disk type that is applicable

to Windows 2000/XP is used.

26. The portable data storage device as claimed in claim
17, wherein said fixed type hard drive segment has
5 an internal file stored therein and internally
includes a start program, and wherein said processing
unit may be triggered via said control unit to locate
a designated start program and automatically execute
the play of said internal file.

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27. The portable data storage device as claimed in claim
25, wherein said fixed type hard drive segment has
an internal file stored therein and internally
includes a start program, and wherein said processing
15 unit may be triggered via said control unit to locate
a designated start program and automatically execute
the play of said internal file.

28. The portable data storage device as claimed in claim
20 26, wherein said fixed type hard drive segment is set
as a read-only segment.

29. The portable data storage device as claimed in claim
27, wherein said fixed type hard drive segment is set
25 as a read-only segment.

30. The portable data storage device as claimed in claim
17, wherein said interface unit comprises a USB plug
for plugging in a corresponding USB socket on said
5 electronic apparatus.

31. The portable data storage device as claimed in claim
17, wherein said control unit comprises a micro
controller.

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32. The portable data storage device as claimed in claim
31, wherein said micro controller includes a read-only
memory for recording a control program.

15 33. A method of dynamically setting a disk type of a
portable data storage device claimed in claim 1,
comprising the steps of:

plugging an interface unit of said portable data
20 storage device in a processing unit of an electronic
apparatus, so that a control unit of said portable
data storage device detects an operating system under
which said processing unit of said electronic
apparatus operates; and

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hiding a segment on a flash memory of said portable data storage device that has a disk type not applicable to said operating system detected by said control unit, so that said processing unit may detect only another segment on said flash memory that has an applicable disk type.

34. The method as claimed in claim 33, wherein a CD-ROM segment on said flash memory is hidden when said detected operating system is Windows 98/ME, so that said processing unit may detect only said another segment that is a fixed type hard drive segment having the applicable disk type.

35. The method as claimed in claim 33, wherein a fixed type hard drive segment on said flash memory is hidden when said detected operating system is Windows 2000/XP, so that said processing unit may detect only said another segment that is a CD-ROM segment having the applicable disk type.

36. The method as claimed in claim 33, further comprising a step of enabling a special functional program internally built in said flash memory.

37. The method as claimed in claim 36, wherein said special functional program comprises a start program for executing an internal file.

5 38. A method of dynamically setting a disk type of a portable data storage device claimed in claim 17, comprising the steps of:

10 plugging an interface unit of said portable data storage device in a processing unit of an electronic apparatus, so that a control unit of said portable data storage device detects an operating system under which said processing unit of said electronic apparatus operates; and

15 hiding one of a first and a second segment on a flash memory of said portable data storage device that has a disk type not applicable to said operating system detected by said control unit, so that said processing unit may detect only another one of said first or said
20 second segment on said flash memory that has an applicable disk type.

39. The method as claimed in claim 38, wherein a CD-ROM
25 segment on said flash memory is hidden when said

detected operating system is Windows 98/ME, so that
said processing unit may detect only said another
segment that is a fixed type hard drive segment having
the applicable disk type.

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40. The method as claimed in claim 38, wherein a fixed
type hard drive segment on said flash memory is hidden
when said detected operating system is Windows 2000/XP,
so that said processing unit may detect only said
10 another segment that is a CD-ROM segment having the
applicable disk type.

41. The method as claimed in claim 38, further comprising
a step of enabling a special functional program
15 internally built in said flash memory.

42. The method as claimed in claim 41, wherein said special
functional program comprises a start program for
executing an internal file.

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